

## IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~striketrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (previously presented), or (not entered).

Please CANCEL claim 20 and AMEND claims 14, 15, and 23-25 in accordance with the following:

Claims 1-13 (cancelled)

14. (currently amended) A method for monitoring a program, comprising:

monitoring a program distributed throughout ~~the~~ a system;

checking for semantic correctness using predetermined heuristics;

adding to the program an instrumentation part ~~to of~~ middleware associated with

the program;

generating a message using in response to at least one operation, performed by

the middleware and detected by the instrumentation part, for transmission to a monitoring process;

initiating ~~an~~ at least one action by the monitoring process; and

presenting a number of the messages as one of a list, a tree chart and a message sequence chart.

15. (currently amended) The method as claimed in claim 14,

wherein the ~~actions include~~ at least one action includes at least one of:

displaying the message;

intervention in execution of the program; and

controlling a unit associated with the program using at least one of open and closed-loop control.

16. (previously presented) The method as claimed in claim 14, further comprising:

waiting by the instrumentation part, after transmitting the message, for a response produced by the monitoring process.

17. (previously presented) The method as claimed in claim 16, wherein the response is produced after one of an input by a user and an automated sequence.

18. (previously presented) The method as claimed in claim 14, wherein the program is a part of a larger program.

19. (previously presented) The method as claimed in claim 14, wherein a function associated with the program is instrumented.

20. (cancelled)

21. (previously presented) The method as claimed in claim 14, wherein said monitoring includes monitoring at least one of a remote procedure call, a message transmission, and a control sequence.

22. (previously presented) The method as claimed in claim 14, wherein the program is used in a technical system.

23. (currently amended) A device for monitoring a program distributed throughout a system, comprising:

means for monitoring ~~a~~the program distributed throughout the system;

means for checking for semantic correctness using predetermined heuristics;

means for adding to the program an instrumentation part ~~to~~of middleware associated with the program;

means for generating a message ~~using~~in response to at least one operation performed by the middleware and detected by the instrumentation part for transmission to a monitoring process;

means for initiating an action by the monitoring process; and

means for presenting a number of the messages as one of a list, a tree chart and a message sequence chart.

24. (currently amended) At least one computer readable medium storing at least one program for controlling at least one processor to monitor a program according to a process comprising:

monitoring a program distributed throughout ~~the~~ a system;

checking for semantic correctness using predetermined heuristics;

adding to the program an instrumentation part ~~to of~~ middleware associated with the program;

generating ~~a~~ at least one message using in response to at least one operation, performed by the middleware and detected by the instrumentation part for transmission to a monitoring process;

initiating an action by the monitoring process; and

presenting a number of the ~~messages~~ at least one message as one of a list, a tree chart and a message sequence chart.

25. (currently amended) A device for monitoring a program executing on a system, comprising:

at least one interface to receive messages from a program distributed throughout the system and including an instrumentation part to generate the messages in response to at least one operation, performed by middleware associated with the program;

a processor to check the messages for semantic correctness using predetermined heuristics, to execute a monitoring process, and to initiate an action based on the monitoring process; and

an output unit to present a number of the messages in one of a list, a tree chart and a message sequence chart.